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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,860

10/11/2004

Ching-Lung Chang

13675-US-PA

5859

31561

7590

05/26/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

TRAN, THUY V

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,860

Applicant(s)

CHANG ET AL.

Examiner

Thuy V. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This is a response to the Applicants' filing on 10/11/2004. In virtue of this filing, claims 1-19 are currently presented in the instant application.

Drawings

1. The drawings submitted on 10/11/2004 are accepted.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

3. Claims 1-3, 5-8, 11-14, 16-17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Han et al. (Pub. No.: US 2005/0007333 A1).

With respect to claim 1, Han et al. discloses, in Fig. 7, a feed back circuit structure for a backlight module comprising (1) a substrate (which is a PCB; see paragraph [0013], line 21), (2) a plurality of tube contacts (which are [32a, 32b]; see Fig. 7; paragraph [0041], lines 3 and 10) disposed on the substrate, (3) a plurality of independent feedback contacts (which are [22a, 22b]; see Fig. 7; paragraph [0041], line 15) disposed on the substrate, wherein each independent feedback contact [22a or 22b] is coupled to one of the tube contacts [32a or 32b] (see Fig. 7), and (4) a common ground feedback contact (which is connected to the feedback contact [22b] (which is shown in Fig. 8) disposed on the substrate such that the common ground feedback contact is coupled to one of the independent feedback contacts [22b].

With respect to claim 2, Han et al. discloses, in Fig. 7, that the structure further comprises an independent feedback plugging stand [21a, 21b; 23a, 23b] disposed on the substrate such that the independent feedback contacts [22a, 22b] are coupled to the independent feedback plugging stand [21a, 21b; 23a, 23b].

With respect to claim 3, Fig. 7 of Han et al. appears to disclose that the structure further comprises a conductive cap (needed for connection) plugged into the independent feedback plugging stand [21a, 21b; 23a, 23b] for connecting the independent feedback contacts [22a, 22b] together.

With respect to claims 5 and 6, Han et al. discloses, in Fig. 7, that the structure further comprises an inherent conductive material comprising conductive plastics or solder blocks (since it is needed for electrical connection) disposed over the independent feedback contacts [22a, 22b] for electrically connecting various independent feedback contacts together.

With respect to claim 7, Han et al. discloses, in Fig. 7, a backlight module comprising (1) a plurality of lamps (see paragraph [0039], line 4), wherein each lamp has a power terminal [32a] (see Fig. 5) and a feedback terminal [32b] (see Fig. 5), (2) a driving module [20] (see Fig. 7) coupled to the power terminals [32a] for driving the lamps (see Fig. 7), (3) a feed back circuit structure having (a) a substrate (which is a PCB; see paragraph [0013], line 21), (b) a plurality of tube contacts (which are [32a, 32b]; see Fig. 7; paragraph [0041], lines 3 and 10) disposed on the substrate, wherein each tube contact is coupled to one of the feedback terminals of the lamps (see Fig. 7), (c) a plurality of independent feedback contacts (which are [22a, 22b]; see Fig. 7; paragraph [0041], line 15) disposed on the substrate, wherein each independent feedback contact [22a or 22b] is coupled to one of the tube contacts [32a or 32b] (see Fig. 7), and (d) a common

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ground feedback contact (which is connected to the feedback contact [22b] (which is shown in Fig. 8) disposed on the substrate wherein the common ground feedback contact is coupled to one of the independent feedback contacts [22b], and (4) a plurality of feedback lines (see Fig. 7) coupling various independent feedback contacts with the driving module [20].

With respect to claim 8, Han et al. discloses, in Fig. 7, that the module further comprises an independent feedback plugging stand [21a, 21b; 23a, 23b] disposed on the substrate such that each independent feedback line is coupled to one of the independent feedback contacts through the independent feedback plugging stand [21a, 21b; 23a, 23b].

With respect to claim 11, Han et al. discloses that the lamps comprise cold cathode fluorescent lamps (see paragraph [0007], line 18-21).

With respect to claim 12, Han et al. discloses, in Fig. 7, a backlight module comprising (1) a plurality of lamps (see paragraph [0039], line 4), each having a power terminal [32a] (see Fig. 5) and a feedback terminal [32b] (see Fig. 5), (2) a driving module [20] (see Fig. 7) coupled to the power terminals [32a] for driving the lamps (see Fig. 7), (3) a feedback circuit structure having (a) a substrate (which is a PCB; see paragraph [0013], line 21), (b) a plurality of tube contacts (which are [32a, 32b]; see Fig. 7; paragraph [0041], lines 3 and 10) disposed on the substrate, wherein each tube contact is coupled to one of the feedback terminals of the lamps (see Fig. 7), (c) a plurality of independent feedback contacts (which are [22a, 22b]; see Fig. 7; paragraph [0041], line 15) disposed on the substrate, wherein each independent feedback contact [22a or 22b] is coupled to one of the tube contacts [32a or 32b] (see Fig. 7) and the independent feedback contacts are mutually connected together, and (d) a common ground feedback contact (which is connected to the feedback contact [22b]; see Fig. 8) disposed on the substrate, wherein

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the common ground feedback contact is coupled to one of the independent feedback contacts [22b], and (4) a feedback line (see Figs. 7 and 8) coupling the common ground feedback contact various independent feedback contact and the driving module [20].

With respect to claim 13, Han et al. discloses, in Fig. 7, that the module further comprises an independent feedback plugging stand [21a, 21b; 23a, 23b] disposed on the substrate such that the independent feedback contacts are coupled to the independent feedback plugging stand [21a, 21b; 23a, 23b].

With respect to claim 14, Fig. 7 of Han et al. appears to disclose that the module further comprises a conductive cap (needed for connection) plugged into the independent feedback plugging stand [21a, 21b; 23a, 23b] for connecting the independent feedback contacts [22a, 22b] together.

With respect to claims 16 and 17, Han et al. discloses, in Fig. 7, that the module further comprises an inherent conductive material comprising conductive plastics or solder blocks (since it is needed for electrical connection) disposed over the independent feedback contacts [22a, 22b] for electrically connecting various independent feedback contacts together.

With respect to claim 19, Han et al. discloses that the lamps comprise cold cathode fluorescent lamps (see paragraph [0007], line 18-21).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 4, 9, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al. (Pub. No.: US 2005/0007333 A1) in view of Kim (U.S. Patent No. 6,459,203 B1).

With respect to claims 4, 9, and 15, Han et al. discloses all of the claimed subject matter, as expressly recited in claims 1, 7, and 12, except for a common ground feedback plugging stand on the substrate such that the common ground feedback contacts or the feedback lines coupled to the common ground feedback contacts are coupled to the common ground feedback plugging stand.

Kim discloses, in Fig. 5, a lamp apparatus for an LCD comprising a common ground plugging stand [9].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the circuit structure of Han et al. with a common ground plugging stand as taught by Kim so as to conveniently ground all grounding contacts altogether and thus to improve the size of the structure since Kim teaches that configuring in such a way can provide the display a thin thickness (see col. 1, line 12).

6. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al. (Pub. No.: US 2005/0007333 A1) in view of Applicants' Admitted Prior Art (AAPA) Fig. 1.

With respect to claims 10 and 18, Han et al discloses all of the claimed subject matter, as expressly recited in claims 7 and 12, except that the driving module further comprises a mutually

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coupled powering device and a feedback controller such that the powering device is coupled to the lamps and the feedback controller is coupled to the feedback lines.

AAPA Fig. 1 shows a driving module comprising a mutually coupled powering device [122] and a feedback controller [124] such that the powering device [122] is coupled to lamps [110] and the feedback controller [124] is coupled to feedback lines [130].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the structure of Han et al. by replacing the driving module of Han et al. with the one taught by AAPA Fig. 1 in a configuration referred to therein in order to improve the luminance control of the backlight module since the controller of AAPA Fig. 1 can compensate the driving current via receiving the feedback signal directly from the lamps (see submitted specification; para. 7, lines 11-14).

Citation of relevant prior art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Kang et al. (Pub. No.: US 2005/0078080 A1) discloses a method and apparatus for controlling operation of lamps;

Prior art Han et al. (Pub. No.: US 2004/0124790 A1) discloses a backlight driving circuit; and

Prior art Lee et al. (U.S. Patent No. 6,857,759 B2) discloses a backlight assembly and LCD apparatus.


Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

05/23/2006


THUY V. TRAN
PRIMARY EXAMINER